



THE UNIVERSITY *of*
NEW ORLEANS

INVITATION FOR BID

**BID NAME AND NUMBER:
BTB2488 UPS POWER SUPPLY**

**BID OPENING TIME AND DATE:
October 4, 2016 @ 2:00pm**

**BUYER:
Troy A Bacino
tabacino @ uno.edu**

RETURN ALL BIDS TO THE FOLLOWING ADDRESS:

**Purchasing Office
Administration Annex 1004G
University of New Orleans
2000 Lakeshore Drive
New Orleans, Louisiana 70148
Phone: (504) 280-6214
Fax: (504) 280-6297**

General Instructions to Bidders

1 Invitation to Bid

Bids for the following items and/or services specified are hereby solicited, and will be received by the Purchasing Office until the stated bid opening time and date and then publicly opened.

2 Authority to Sign

Bids must be signed by a person authorized to bind the vendor. In accordance with R. S. 39:1594(C)(4), the person signing the bid must be: 1) A current corporate officer, partnership member or other individual specifically authorized to submit bids as evidenced in appropriate records on file with the secretary of State; or 2) An individual authorized to bind the vendor, as evidenced by a corporate resolution, certificate, or affidavit; or 3) other documents indicating authority which are acceptable to the University.

3 Read Solicitation

Read the entire solicitation, including all terms, conditions, and specifications.

4 Corrections

All bids should be returned on the forms furnished and must be typed or written in ink. Any corrections or erasures must be initialed by the bidder.

5 Delivery of Bids

Bids may be submitted in person or by mail. The mailing address, fax number, and e-mail address are listed on the cover sheet. All faxed or e-mailed bids will be printed and put into envelopes by office personnel.

Bids delivered in person or by mail should be placed in a sealed envelope and marked with the bid name and number, the bid opening time and date, and the name and address of the bidder. The same information should be affixed to any additional materials sent as a part of the bid submission.

6 Bid Alterations

Alterations to bids will be accepted provided both the bid and alterations have been received in the Purchasing Office prior to bid opening time and date.

7 Late Bids

Late bids will not be accepted and will be returned unopened. Each bidder is solely responsible for the timely delivery of its bid. The University will not be responsible for any delay in the delivery of bids.

8 Delivery/Freight Charges

Bid prices will include all delivery/freight charges paid by the vendor, F.O.B., UNO, inside delivery, New Orleans, La, unless otherwise stated in the specifications. Any invoiced delivery charges not quoted and itemized on the UNO purchase order are subject to rejection and non-payment.

9 Taxes

Vendor is responsible for including all applicable taxes in the bid price. The University of New Orleans is exempt from all Louisiana state and local sales and use taxes. By accepting an award, all firms acknowledge their responsibility for the payment of all taxes duly assessed by the State of Louisiana and its political subdivisions for which they are liable.

10 Payment

Assuming there is no prompt payment discount provision, payment will be made within thirty (30) days

from receipt of products in satisfactory condition, or within thirty (30) days from date of invoice, whichever is later. Delinquent payment penalties are governed by L.R.S. 39:1695. Vendor penalties to the contrary shall be null and void, shall have no legal force, and shall not be recognized by the University in any dispute.

11 Acceptance

Only the issue of a purchase order or a signed acceptance of a proposal constitutes acceptance on the part of the University.

Bid Signature

By signing this bid, the bidder certifies compliance with all general instructions to bidders, terms, conditions, and specifications, and further certifies that this bid is made without collusion or fraud.

<hr/> Bidder (Company Name)	<hr/> Mailing Address
<hr/> Authorized Signature	<hr/> City, State, Zip Code
<hr/> Printed Name	<hr/> Phone Number
<hr/> Title	<hr/> Fax Number
<hr/> E-Mail Address	<hr/> Federal Tax ID #

Standard Terms and Conditions

These standard terms and conditions apply to all UNO solicitations, unless otherwise specifically amended and provided for in the special terms and conditions, specifications, or other solicitation documents. In the event of a conflict between the General Instructions to Bidders or Standard Terms & Conditions and the Special Terms & Conditions, the Special Terms & Conditions shall govern.

Auditors

Bidders agrees that the Legislative Auditor of the State of Louisiana and/or the Office of the Governor, Division of Administration auditors and/or the University's auditors will have the option of auditing all accounts of the Bidder which relate to this purchase.

Award

Award will be made to the lowest responsible and responsive bidder. The University reserves the right to award the items, separately, grouped, or on an all-or-none basis, and to reject any or all bids and to waive any informalities including technicalities in specifications that would preclude competition.

All solicitation specifications, terms, and conditions will be made part of any subsequent award as if fully reproduced and included therein, unless specifically amended in the formal contract.

Bidder Inquiries

If a bidder is in doubt as to the meaning of any part of a solicitation, bidder may submit a written request for interpretation to the Buyer of Record. Requests must be received in the Purchasing Office no later than September 27, 2016 prior to the opening of bids. Any interpretation of the documents will be made by Addendum only, issued by the Purchasing Office, and a copy of such Addendum will be sent to all known bidders. The University will not be responsible for any other explanation of the documents.

Contrary Terms and Conditions

Submittal of any terms and conditions contrary to those contained within this solicitation may cause your bid to be rejected. By signing this bid, vendor agrees that any terms and conditions which may be included in their bid are nullified.

Equal Employment Opportunity Compliance

By submitting and signing this bid, vendor agrees to abide by the requirements of the following as applicable: Title VI and VII of the Civil rights Act of 1964, as amended by the Equal Opportunity Act of 1972, Executive Order 11246, Rehabilitation Act of 1973, as amended; the Vietnam Era Veteran's Readjustment Assistance Act of 1974; Title IX of the Education Amendments of 1972; the Age Act of 1975; the Americans with Disabilities Act of 1990. Vendor agrees not to discriminate, and to render services without regard to race, color, religion, sex, age, national origin, veteran status, political affiliation, handicap, disability, or other non-merit factor. Failure to comply shall be grounds for termination of any contract entered into as a result of this solicitation.

Equivalency

Any manufacturer's names, trade names, brand names, or catalog numbers used in the specifications are for the purpose of describing and establishing general quality levels. Such references are not intended to be restrictive. Bids will be considered for any brand that meets or exceeds the quality of the specifications listed for any item. Bidder must state the brand/model he or she is bidding on each

item. Bids not specifying brand and model number will be considered as offering the exact product specified in the solicitation.

It will be the sole responsibility of the Bidder to prove equivalency. Bidder will submit with the bid all illustrations, descriptive literature, and specifications necessary to determine equivalency. Failure to do so may eliminate the bid from consideration. The decision of the University as to equivalency will be final.

Governing Law

This purchase shall be construed in accordance with and governed by the laws of the State of Louisiana.

Louisiana Preference

A preference will be given to materials, supplies, and provision produced, manufactured, assembled, grown, or harvested in Louisiana, quality being equal to articles offered by competitors outside of the state. However, it will be the bidder's sole responsibility to indicate on his bid response which items were (or would be) produced, manufactured, assembled, grown, or harvested in Louisiana. Bidder must be able to provide satisfactory evidence to support preference claim if requested by the University. The enclosed Louisiana Preferences **must** be returned as a part of this bid.

Legislators Prohibited

According to LAS-R.S. 42:113(D)) the University is prohibited from entering into any contract or subcontract with a legislator or person who has been certified by the Secretary of State as elected to the Legislature or spouse of a legislator, or any corporation, partnership, or other legal entity in which the Legislator or his/her spouse owns an interest, except publicly traded corporations. Each bidder **must** return the enclosed Disclosure Form as a part of his bid.

New Products

All products are to be new, current model, and of best quality as measured by accepted standards of the trade. No remanufactured, demonstrator, used, or irregular products will be considered for purchase unless otherwise specified.

Warranty

The manufacturer's standard published warranty and provision will apply, unless more stringent warranties are otherwise required by UNO and specified in the solicitation. In such cases, the bidder and/or manufacturer will honor the specified warranty requirements, and bid prices will include any premium costs of such coverage.

DISCLOSURE FORM

EACH BIDDER IS TO DISCLOSE THE FOLLOWING INFORMATION BY ANSWERING YES OR NO TO THE FOLLOWING QUESTIONS:

1. Is the bidder a legislator or person who has been certified by the Secretary of State as elected to the Legislature? _____
2. Is the bidder a spouse of a legislator? _____
3. If the bidder is a corporation, partnership, or other legal entity, does a legislator or his spouse own any interest in that corporation, partnership or other legal entity?

4. If the bidder is a corporation, is it a publicly traded corporation? _____

LOUISIANA PREFERENCES

FAILURE TO SPECIFY BELOW INFORMATION **WILL** CAUSE ELIMINATION FROM PREFERENCE.
Preferences shall not apply to service contracts.

In accordance with the Louisiana Revised Statutes 39:1595, a preference of 10% may be allowed for products produced, manufactured, grown or assembled in Louisiana of equal quality.
Do you claim this preference? YES _____ NO _____

Specify Item Numbers:

Specify location within Louisiana where this product is produced, manufactured, grown or assembled:

Do you have a Louisiana Business workforce? YES _____ NO _____

If so do you certify that at least fifty percent (50%) of your Louisiana business workforce is comprised of Louisiana residents?

YES _____ NO _____

Special Terms and Conditions

1. All items delivered shall be subject to inspection as to grade and/or quality. If any item is inspected and fails to meet the specifications, the delivery already made will be held for the Vendor's disposition or returned to the Vendor via Freight Collect. If the Vendor fails to make satisfactory replacement within a reasonable time as determined by the University, the University reserves the right to cancel the item and to purchase it elsewhere.
2. If bidding other than the specified brand/model, a sample should be submitted with the bid.
3. Sample(s) should be submitted with the bid. Packages should be clearly labeled with the bid number/name and bid opening date. Each individual sample within the package should be clearly labeled with the manufacturer's brand name and number, and item reference. Samples must be furnished free of expense to the University.
4. The above quantities are estimated to be the amounts needed. In the event a greater or lesser quantity is needed, the right is reserved by the University to increase or decrease the amount at the unit price stated in the bid.
5. In the event a greater quantity is needed, the right is reserved by the University to increase the amount, at the unit price stated in the bid, for three months from the date of award.
6. At the option of the University and acceptance by the contractor, this contract may be extended for four additional twelve (12) month periods at the same prices, terms, and conditions. The initial contract period will be from date of award through June 30th of the initial contract year. Renewals will be from July 1st through June 30th of the remaining contract years. Contract shall not exceed sixty (60) months.
7. If the Vendor fails to make delivery within a satisfactory time as determined by the University, the University reserves the right to cancel the item and to purchase it elsewhere, charging the increase in price and cost of handling, if any, to the Vendor making the original unsatisfactory or late delivery.
8. Discounts for less than 1% and for less than thirty (30) days will not be considered in making awards.
9. Site Visit: In order to ascertain the true scope of the services requested, all bidders are urged and expected to inspect the site where services will be performed. Arrangements to do so may be made by contacting the buyer. Failure to inspect the site will **not** constitute grounds for a claim after contract award.
10. NOTE: If, upon visiting site, Vendor finds conditions that disagree with the physical layout as described in this bid, or other features of the specifications that appear to be in error, vendor shall notify the buyer immediately.

11. It shall be specifically agreed and understood that the Bidders may attend the Bid opening. They shall, whenever any award is considered, furnish specific samples for examination upon request by the University. It shall also be specifically agreed and understood that the decision of the University shall be final.
12. The University reserves the right to cancel this contract upon thirty (30) days written notice for failure of the Vendor to deliver on time, for delivery of unsatisfactory merchandise, or for any unsatisfactory performance by the Vendor as determined by the University.
13. This agreement may be terminated by either party with ____30__ days advance notice in writing.
14. Successful bidder will furnish written factory instructions for the operation and maintenance of the equipment purchased.
15. Successful bidder will be responsible for the unloading and placing of equipment and/or supplies in the location designated by the University.
16. Successful bidder will furnish a representative to demonstrate the operation and maintenance of the equipment.
17. Delivery Schedule: All Bidders are put on notice that the items listed on this proposal are to be delivered after the date of completion of the facilities, unless a prior date is so specified in the bid. Delivery requirements shown on this bid are necessarily approximate due to the uncertainty of the firm completion date of construction of the facilities. After issuance of the purchase order, the University will endeavor to ascertain a firm delivery date in each instance so as to avoid creating a hardship of the Vendor. In any event, no deliveries will be made without prior approval of the University.
18. Vendor compliance with the attached insurance requirements is mandatory, and evidence of such compliance should be submitted with the bid. Failure to do so may result in immediate disqualification of the bid.
19. Vendor compliance with the attached insurance requirements is mandatory, and evidence of such compliance must be submitted before work can commence.
20. In case of default by the Vendor, the University reserves the right to purchase any or all items in default on the open market, charging Vendor with any excessive costs. Should such charge(s) be assessed, no subsequent bids of the defaulting Vendor will be considered until the assessed charge(s) have been satisfied.
21. The successful bidder will be required to assume responsibility for all services and/or products offered in his/her bid whether or not he/she produces them. Further, the University of New Orleans will consider the selected bidder to be the sole point of contact with regard to contractual matters, including payment of any and all charges resulting from the contract.
22. List of distributors: The Vendor signing the bid shall be designated as the Prime Vendor on any contract/agreement resulting from this bid. If additional Vendors are authorized to receive

orders for items covered under this proposal, the Vendor must submit, with bid, a list of those additional authorized distributors.

23. Delivery is of the essence and the University reserves the right to award to that Vendor providing the earliest delivery date. The University also reserves the right to reject any Vendor who cannot make delivery within 60 calendar days from the date of award.
State firm delivery date here: _____
24. Vendors are advised that all hazardous products must be accompanied by a "Hazardous Materials Data Sheet". This sheet must also include suggested antidotes for ingestion and other contact.
25. Successful Vendor shall inspect jobsite and make his/her own measurements prior to installation.
26. Items furnished shall be delivered to the University, uncrated, set in place, installed (if requested), and all debris removed by the Vendor.
27. Scope of Work: work shall include all labor, materials, and services required to produce a completed repair/installation which is acceptable to the University.
28. Final Clean-Up: Before this project is acceptable and complete, Vendor shall clean up and remove from the premises all debris resulting from his work, and shall see to it that all the items furnished is/are left in good order, clean, and properly installed.
29. Award to be made on an all-or-none basis for the lowest bid for item 1. Option and Maintenance not included in award model.
30. All equipment must be new and delivered F.O.B. University of New Orleans, inside delivery.
31. All hardware and software must be new and delivered, F.O.B. University of New Orleans, inside delivery.
32. Fiscal Funding: The continuation of any agreement entered into as a result of this bid past the current fiscal year is contingent upon the appropriation of funds to fulfill the requirements of the contract by the legislature. If the legislature fails to appropriate sufficient monies to provide for the continuation of the contract, or if such appropriation is reduced by the veto of the Governor or by any means provided in the appropriations act to prevent the total appropriation for the year from exceeding revenues for that year, or for any other lawful purpose, and the effect of such reduction is to provide insufficient monies for the continuation of the contract, the contract shall terminate on the date of the beginning of the first fiscal year for which funds are not appropriated.
33. Escalation Clause (Only for services you know will increase. e.g. insurance)

Prior to any renewal term, the contractor may request a price increase for that renewal term based on documented increase costs. The University reserves the right to approve or disapprove the price increase.

THE UNIVERSITY COMPUTING CENTER DESIRES TO PURCHASE AN UNINTERRUPTIBLE POWER SYSTEM. THE BID WILL BE AWARDED TO THE OVERALL LOWEST, RESPONSIBLE BIDDER THAT MEETS THE SPECIFICATIONS BELOW. The owner shall have the option to purchase an additional extended manufacturer’s warranty at the time of purchase.

ITEM QTY.		DESCRIPTION	UNIT COST	EXTENDED COST
1	1	AS STATED BELOW	\$_____	\$_____
		OPTION AS STATED BELOW WITH 5 YR WARRANTY	\$_____	\$_____
		QUOTING MFG. & MODEL # _____		
		BIDDER TO COMPLETE		
2	1	MAINTENANCE AS DESCRIBED IN SECTION 3.5	\$_____	PER YR

DELIVERY REQUIREMENT: QUOTED DELIVERY WILL BE A CONISDERATION IN THE AWARDING OF THIS BID. THE EQUIPMENT MUST BE DELIVERED AND ONSITE NO MORE THAN 60 CALENDAR DAYS AFTER RECEIPT OF ORDER.

DELIVERY WILL BE MADE _____ CALENDAR DAYS AFTER RECEIPT OF ORDER.

(BIDDER MUST COMPLETE)

BY SIGNING THIS BID, THE VENDOR IS BOUND TO THE ABOVE SPECIFIC DELIVERY REQUIREMENT.

- A. **PAYMENT TERMS WILL BE 90% WITHIN 30 DAYS AFTER DELIVERY and INSTALLATION.** Offloading of equipment at the jobsite and setting in place of all equipment including batteries shall be the responsibility of the winning bidder. Installation and wiring of all equipment including batteries shall be the responsibility of successful bidder. The complete wired and assembled UPS module, controls, batteries and accessories shall be inspected and tested on-site by the manufacturer’s certified technicians in the presence of the owner’s representative. The manufacturer personnel involved in the system start-up and testing shall provide training concurrent to system start-up. **THE REMAINING 10% WILL BE MADE WITHIN 30 DAYS OF SUCCESFUL SYSTEM TESTING AND TRAINING.**

1.1 SCOPE OF WORK

A. The following specification is for the UPS System, 1 new battery bank and 1 pre-existing battery bank with miscellaneous equipment, accessories and wiring.

1.2 DESCRIPTION OF SYSTEM

This specification describes a three phases, continuous duty, solid state, uninterruptible power supply (UPS). The UPS shall operate in conjunction with the existing building electrical system to provide precisely controlled power for critical equipment loads. The system shall consist of a solid state inverter, rectifier/battery charger, a storage battery, a static bypass transfer switch, synchronization control circuitry, connection control circuitry, disconnection control circuitry, system metering, system status indicators, system alarm annunciation circuitry, and accessories as specified herein. The system shall automatically ensure continuity of electric power within specified tolerances, without interruption, upon failure or deterioration of the normal power supply. Continuity of electric power to the load shall be supplied by the batteries, up to the specified maximum protection time or until restoration of the normal input AC power source, whichever occurs first.

1.3 QUALITY ASSURANCE AND STANDARDS

A. The manufacturer shall have a documented quality assurance program with:

1. Inspections on incoming parts, modular assemblies and final products.
2. A final test procedure for the product, which includes proof of performance specifications.
3. An on-site test procedure that includes an inspection of controls and indicators after installation of the equipment.
4. An ISO 9001 quality certification

B. The UPS shall meet the requirements of the following standards:

1. UL-1778, Standards for Uninterruptible Power Supply Equipment. The UPS shall be listed per UL-1778 by the UL agency.
2. ANSI C62.41 (IEEE 587), ISO 14001:2004, CUL
3. The UPS shall be designed in accordance with the applicable sections of the documents published by:
4. National Fire Protection Association (NFPA)/ National Electric Code (NEC)
5. National Electrical Manufacturer's Association (NEMA)
6. Occupational Safety & Health Administration (OSHA)

7. All components shall be listed by Underwriter's Laboratories, Inc. (UL) whenever such listings have been established.
8. ISO 9001 Quality Standard

C. All materials and parts comprising the UPS shall be new, of current manufacture, and shall not have been in prior service, except as required during factory testing.

D. All active electronic devices shall be solid state and not exceed the manufacturers recommended tolerances for temperature or current to ensure maximum reliability. All semiconductor devices shall be sealed. All relays shall be provided with dust covers.

E. The UPS shall be furnished as a complete system. All UPS equipment and accessories are inter-related and shall be provided as required for a complete system.

F. The UPS manufacturer shall have a minimum of five years of successful operation in on-line three-phase parallel UPS systems.

G. The topology used shall be a true on-line topology as defined by the IEC 62040-3 standard for on-line double conversion UPS systems

H. The design configuration in parallel redundant with 2 (N+1) mode of operation shall achieve an overall system MTBF (Mean Time Between Failure) of not less than 250,000 hours.

1.4 SUBMITTAL DOCUMENTS

6 copies of a complete submittal, including but not limited to the following details, shall be provided.

- A. Complete shop drawings showing at minimum the weights and dimensions of all proposed equipment.
- B. System single line diagram and related submittal drawings.
- C. Complete system description including all performance parameters of all proposed equipment.

PART 2 – PRODUCTS

2.1 MANUFACTURERS

- A. Certain items in this specification are listed by manufacturer and/or manufacturer's model number to establish general style, type, character, and quality of the product desired. Similar items manufactured by other than those listed will be considered.
- B. Where no manufacturer or model number is given, any product meeting performance or design criteria, or referenced trade association standard may be used.

2.2 OPERATING REQUIREMENTS

- A. Module Type: The UPS system shall be a single module system.
- B. Module Load: The UPS system shall be able to supply a minimum load of 100kVA/100 kW, with an input and output connection of 208V, 3-phase, 4-wire, with ground.
- C. Battery Protection: The UPS system shall be provided with 2 parallel external battery banks. It will use the customers' existing battery bank (40 jars) and the successful bidder will supply the second bank of batteries (40 jars) (including wiring) which shall be greater and/or equal to the existing batteries which are HRL 12500W FR 12V 500W/Cell/1.67V/15Min. The battery banks shall be capable of supporting the rated module power for a minimum period of 20 minutes at 80% load at a temperature of 25°C.

2.3 SYSTEM MODES OF OPERATION

The UPS module shall operate in the following modes.

- A. Normal: The inverter shall continuously supply 100% of the power to the critical load. The rectifier/battery charger shall derive power from the utility AC source and supply DC power to the inverter while simultaneously float charging the batteries. The UPS module shall supply uninterrupted power to the total load during normal, emergency, or recharge operation.
- B. Emergency: Upon failure of the utility AC power source, the inverter, which, without any switching, shall obtain power from the batteries and continue to supply the critical load. Upon restoration of the input power from utility or back-up generator power (prior to complete battery discharge) the rectifier shall automatically start providing power to the inverter and simultaneously charge the battery. There shall be no interruption to the critical

load upon failure or restoration of the utility AC power source.

- C. Bypass: The static switch shall be used to transfer the load to the system bypass without interruption to the critical power load. This shall be accomplished by turning the inverter off. Automatic re-transfer or forward transfer of the load shall be accomplished by turning the inverter on.

2.4 UPS MODULE MODES OF OPERATION

The UPS module shall be designed to operate as an on line reverse transfer system in the following modes.

- A. Normal: The UPS module shall continuously supply power to the critical load via the inverter. The rectifier/battery charger shall derive power from the utility AC source and supply DC power to the inverter while simultaneously float charging the battery.
- B. Emergency: Upon failure of the utility AC power source, the critical load shall be supplied by the inverter, which, without any switching, shall obtain its power from the storage battery. There shall be no interruption to the critical load upon failure or restoration of the utility AC source.
- C. Recharge: Upon restoration of the utility AC source (prior to complete battery discharge), the rectifier/battery charger shall power the inverter and simultaneously recharge the battery. This shall be an automatic function and shall cause no interruption to the critical load.
- D. Downgrade: If the battery only is to be taken out of service for maintenance, it shall be disconnected from the rectifier/battery charger and inverter by means of a battery disconnect. The UPS shall continue to function as specified herein, except for power outage protection and high transient response characteristics.

2.5 CRITICAL PERFORMANCE REQUIREMENTS

A. System Input

1. Voltage Range: 208 VAC, + 10% / 15%, 3 phase, 4 wires plus ground
2. Frequency Range: 60 Hz, $\pm 10\%$
3. Input Power Factor: up to 0.9 at full load and nominal input voltage.

B. System Output

1. Voltage: 208-120 VAC, 3 phase, 4 wires plus ground (adjustable +/- 5%).
2. Voltage Regulation: + 1.0% for balanced load;
3. Frequency: 60 Hz + 2.0 Hz synchronized with bypass (selectable in 0.25 Hz increments). 60 Hz + 0.05Hz free running.
4. System Overload: The UPS module shall be capable of supplying regulated output voltage during overloads of up to 125% of its ratings for a period of 10 minutes and 150% for one (1) minute. System Efficiency: The overall efficiency of the module (AC to AC), with nominal input voltage, battery fully charged and the inverter supplying full rated load, shall be 93.0% at 100% load and 93 % at 50% load.

2.6 ENVIRONMENTAL CONDITIONS

The UPS shall be capable of withstanding any combination of the following environmental conditions in which it must operate without mechanical or electrical damage, or degradation of operating characteristics.

A. Ambient Temperature

1. Operating: 0°C to 40°C
2. Non-operating and Storage: -25°C to 70°C

B. Relative Humidity

1. Operating: 0 to 95% for temperatures from 0°C to 40°C
2. Non-operating and Storage: 0 to 95%

C. Barometric Pressure

1. Operating: From sea level to 3,000 feet without de-rating

D. Recommended Operating Environment (UPS)

1. Ambient Temperature: 18°C to 25°C
2. Relative Humidity: 40 to 90%

E. Audible Noise Levels (UPS)

1. Ambient Noise at Full Load: <68 DBA at 1 meter

2.7 RECTIFIER/BATTERY CHARGER

- A. Incoming AC power shall be converted to a regulated DC output voltage by the rectifier/battery charger. A solid-state SCR phase-controlled bridge rectifier shall provide regulated DC voltage, which shall be subsequently filtered to provide power for the inverter and battery charging functions. The rectifier/battery charger shall employ input AC current limiting as well as battery charge current limiting for battery protection. The battery charging circuitry shall be capable of being set for automatic battery recharge operation, float service, manual battery charge service and equalizing or commissioning operation.
- B. AC Input Protection: The rectifier/battery charger shall be protected by means of an AC input switch. The SCRs shall be protected by fuses that shall only open in the event of catastrophic failure to prevent destruction of the semiconductors and shall not operate as an over-current protection system. Overloads in excess of the rectifier/battery charger's normal rating or sensing of an abnormally high DC voltage condition shall cause the AC input switch to be shunt tripped open.
- C. Overload Protection and Disconnection: An automatic input circuit breaker shall be provided to disconnect the rectifier/battery charger in the event of an overload or abnormally high DC bus voltage. The overload protection system shall not be activated when the rectifier/battery charger is started under any normal operating conditions.
- D. Capacity: The rectifier/battery charger shall have sufficient capacity to support a fully loaded inverter and recharge the battery to 95% of its full capacity within 10 times the discharge period when input current limit is set at 125% of the normal full load rating.
- E. Current Limiting: Two separate and distinct current limiting schemes shall be employed in the rectifier/battery charger.

1. Input AC Current Limit:

- a. The AC input current limit shall operate such that the total DC output current of the rectifier/battery charger is sufficient to operate the inverter at rated load and recharge a discharged battery to 95% of its original capacity in 10 times the discharge period. Current demands in excess of this setting shall cause a corresponding decrease in the rectifier/battery charger output DC voltage. Input current limit shall be set at 150% of nominal input current. A programmable second step input current limit, allowing a further limit of the input current, shall be activated by a dry contact input.

2. Battery Charging Current Limit:

- a. The battery charge current limit shall limit the DC recharge current by reducing the rectifier/battery charger DC output voltage when a set current limit set in the UPS personalization is reached. The charger may apply up to 10% of the nominal DC current to the battery, ensuring a recharge time equal to 10 times the discharge time at full load.

2.8 BATTERY CHARGER OPERATION

The battery charger logic circuitry shall accommodate two modes of operation.

- A. Automatic: In this mode of operation, the battery charge output voltage shall be set at a charge voltage which shall be slightly higher than the normal float voltage after the UPS experiences input AC power outages of a set (selectable between 0 - 255 seconds) duration. After (0 - 255 hours) of operation at the charge voltage, the battery charger output voltage shall automatically revert to the normal float voltage condition. For input AC power outages of less than the selected duration, the normal float voltage level shall be maintained.
- B. Float Service: In this mode of operation, the battery charger output voltage shall be capable of providing a float voltage that can be adjusted to the desired value depending on the number and type of cells used in the external battery.

2.9 INVERTER

- A. The UPS output shall be derived from a Pulse Width Modulated (PWM) output signal with active error gain correction, and shall utilize IGBT (insulated gate bipolar transistors) on the inverter design. The inverter shall be capable of providing the specified precise output power characteristics while operating over the battery voltage range with no deterioration of performance specifications.
- B. Inverter DC Protection: The inverter shall be protected by the following features that shall be independently adjustable for maximum system flexibility.
 - 1. Output Protection: The inverter shall immediately current limit to protect against overloads and abnormal load conditions, which exceed the unit's rating without sustaining any damage to any part of the UPS.
 - 2. Over-current Protection: The inverter shall be protected from excessive overloads, including faults and reverse currents, by fast-acting fuses to prevent damage to power semiconductors. The purpose of the inverter output fusing shall be only to clear inverter failure faults. These fuses shall not clear in the event of a load short on the inverter output.

3. Surge Protection: The inverter shall have built-in protection against under voltage, over current, and over-voltage surges on the output caused by load transfer between the UPS and the bypass AC input source.
4. Output Load Power Factor: The UPS inverter shall be designed to provide the rated kW specified when connected to loads with power factors ranging from 0.8 lagging to unity and shall have a minimum output power factor of 0.9.
5. Thermal Overload Protection: The inverter shall be provided with thermal overload protection to alarm and then protect against fan failures and high internal ambient temperature conditions.

2.11 DISPLAY AND CONTROLS

- A. The control panel shall comprise the controls and indications required to check the general status of the system. The control panel shall be designed to provide an easy and rapid overview of system status and shall not require particular training. The control panel shall indicate:
 1. normal operation (load protected)
 2. operation with load on battery power
 3. abnormal situations (operating problem)
 4. dangerous situations (load not protected)
- B. The logic circuitry shall include self-test and diagnostic circuitry such that a fault can be isolated down to the printed circuit assembly or plug-in assembly level. Every printed circuit assembly or plug-in power assembly shall be monitored. Diagnostics shall be performed via a PC through the local diagnostic port on the unit.
- C. The UPS modules and System Bypass Cabinet shall be provided with a system status and a control panel that controls, monitors and displays system operation and parameters. The UPS display shall utilize a combination of front panel steady state and flashing LEDs, a backlit LCD display and mechanical keypad. The display/keypad shall incorporate multiple menus which provide step-by-step procedures for system operation, display metering functions, and display of all normal and alarmed conditions.
- D. The UPS shall be equipped with an audible alarm will sound under the following situations:
 1. load supplied by the bypass AC source.
 2. load on battery.
 3. operating problems that cause a summary alarm or major alarm condition and require operator attention.

E. The UPS display shall indicate all of the following power measurements for the specific UPS module.

1. AC rectifier input source
 - a. phase-to-phase voltages
 - b. currents of the three phases
 - c. frequency
2. AC bypass input source (utility 2)
 - a. phase-to-neutral voltage
 - b. phase-to-phase voltages
 - c. frequency
 - d. currents of the three phases
3. Battery
 - a. voltage
 - b. charge or discharge current
 - c. remaining battery time (for the specific UPS module)
 - d. battery temperature
4. Output load
 - a. phase-to-neutral voltage
 - b. phase-to-phase voltages
 - c. currents of the three phases
 - d. frequency
 - e. active and apparent power
 - f. frequency

F. The UPS shall be equipped with a time stamped event log that shall:

1. log all UPS events and alarms with a date and time stamp
2. allow referencing of the last 100 alarm / events that occurred on the UPS module
3. provide general statistical data on UPS operation
4. provide measurement records for a number of physical values concerning system operation.

5. The time-stamping information shall be accessed via the keypad and display (standard equipment).
- G. The UPS shall maintain an operating log that indicates the last 30 measurements recorded for the given parameter in chronological order. Measurements shall be taken every 30 days. The displayed measurements are instantaneous values. The following parameters shall be tracked for the operating log:
 1. Automatic Diagnostics: The UPS shall be equipped with a continuously operating auto-diagnostic system that evaluates the operating condition of the UPS and all the sub components. In the event that the diagnostics system detects a problem, the system shall sound an audible alarm to alert the operator.

2.12 COMMUNICATIONS FEATURES

- A. Provides E-Mail Notifications of UPS Status and UPS Events through Internet
- B. Provides Remote Control of UPS through Internet
- C. Provide a wall-mounted remote alarm status panel in 1st floor computer room, with indicating LED's displaying UPS status and any active alarms. The alarms shall be a latching type, such that if an alarm is triggered, the LED will stay ON (latch) even if the alarm is corrected. The parameters monitored and controls provided on the status panel shall include at minimum:
 1. UPS on line LED
 2. Battery shut down imminent LED
 3. Load on bypass LED
 4. Charger on LED
 5. Overload shut down LED
 6. UPS on battery LED
 7. Summary alarm LED
 8. Alarm Reset push-button: (white LED), to reset latching alarms
 9. Audible Alarm: for alarm annunciation
 10. Audible Alarm reset push-button: (white LED), to silence the audible alarm

2.13 STATIC BYPASS TRANSFER SWITCH

A static bypass transfer switch shall be provided as an integral part of the UPS. The control logic shall contain an automatic transfer circuit that senses the status of the inverter logic signals and alarm conditions to provide an uninterrupted transfer of the load to the AC bypass input source without exceeding the transient limits specified herein when a malfunction occurs in the UPS or when an external overload condition occurs. The static bypass transfer switch shall be an electronic static type switch, which provides a make before break or seamless overlap type transfer. The static bypass transfer switch shall be 100% rated for continuous duty and shall not rely on any mechanical current carrying components.

2.14 DC BUS

The UPS shall be furnished with a battery disconnect breaker mounted internal to the UPS. the battery disconnect breaker shall allow complete interruption of all DC current to the UPS module. The battery breaker shall automatically open in the event of the battery voltage falling to the maximum allowable discharge voltage, activating the emergency power off (EPO / REPO) system.

2.15 MECHANICAL DESIGN

- A. The UPS shall be housed in a freestanding enclosure with a dead front construction. The back of the UPS shall be capable of being mounted as close to a wall as practical. The UPS cabinet shall be designed for top cable entry. Copper wire or bus shall be exclusively for all internal electrical connections excluding heat sink subassemblies. Front access only shall be required for installation and maintenance. All power connections and component removal shall be possible from the front only.
- B. Forced air-cooling shall be provided to ensure that all components are operated within their specified temperature ratings. Power component modules shall be cooled by redundant fans located directly above critical power components ensuring that the cooling air path is not obstructed. Internal air baffles shall carry heated air from large magnetic components directly outside of the UPS to minimize the interior cabinet temperature. Redundant fans shall also be located above the air baffles. Fan failures or a thermal overload shall be annunciated by a contact closure. Air inlets shall be provided from the front of the UPS enclosure. Air exhaust shall be from the top portion of the unit. Air filters on the inlets shall be provided as standard and shall be readily replaceable from the front of the unit with out the requirement of opening the UPS module doors.
- C. The audible noise level from the UPS shall be less than 68 dB "A" weighing when measured five feet in front of the unit.

2.17 ACCESSORIES

A. Provide a wall-mounted remote alarm status panel, with indicating LED's displaying UPS status and any active alarms. The alarms shall be a latching type, such that if an alarm is triggered, the LED will stay ON (latch) even if the alarm is corrected. The parameters monitored and controls provided on the status panel shall include at minimum:

1. UPS on line
2. Battery shut down imminent
3. Load on bypass
4. Overload shut down
5. UPS on battery

PART 3 – EXECUTION

3.1 DELIVERY AND INSTALLATION

- a. Included in the quotation shall be the delivery to the jobsite all equipment specified above.
- b. Offloading of equipment at the jobsite and setting in place of all equipment including batteries shall be the responsibility of the successful bidder.
- c. Installation and wiring of all equipment shall be the responsibility of the successful bidder including reusing existing external bypass system (Eaton PRI4 Panelboard) that is rated for a 160KVA UPS, which will need to update breakers to accommodate new UPS system and to completely rewire the DC infrastructure (including but not limited to battery to battery wiring) for the 2 battery banks which are located in an adjacent room.
- d. The successful bidder must be a factory authorized dealer of the UPS being installed and be manufacturer certified and hold electrical license in the state of Louisiana. At the time of the award successful bidder must have valid and current licenses to complete work specified in this bid.
- e. The unit must fit in an area 35Wx39Dx80H inches.

3.2 TRAINING

The manufacturer personnel involved in the system start-up and testing shall provide training concurrent to system start-up.

3.3 UPS WARRANTY

The UPS manufacturer shall warrant the equipment specified herein to be free from defects in material and workmanship. In the event any defects are discovered by the Owner within 12 months from the acceptance of such equipment, the UPS manufacturer shall perform or replace defective products at no cost to the owner.

3.4 BATTERY WARRANTY

The battery manufacturer's warranty shall be a minimum of 12 months and shall be extended to the final customer.

3.5 MAINTENANCE

The UPS shall come with one annual planned maintenance service to be performed at the first anniversary of the installation. No rear access shall be required for any part replacement or maintenance procedure. All parts of the UPS shall be designed to facilitate rapid maintenance. Thermal scanning of all current carrying connections shall be accessible from the front of the UPS.

3.6 SYSTEM TESTING

The complete wired and assembled UPS module and controls shall be inspected and tested on-site by the manufacturer's certified technicians in the presence of the owner's representative, and shall include the minimum requirements as follows:

B. The UPS shall be tested on site in accordance with the following procedures:

1. A type written test report that shows the results of the individual tests, that the equipment has satisfactorily completed the tests, and the UPS has the capability to support the load, as required by the specifications. During site test all system's parameters must be recorded.

2. The UPS manufacturer shall provide all necessary testing. All test instruments shall be calibrated.

C. The site inspection and tests should include:

1. Verification of the integrity of the installation.
2. Inspection to ensure that no shipping damage has occurred.
3. Documentation and repair of any defective and missing parts.
4. General operation and functional test of each UPS module and UPS system and verification of proper operation of all controls, alarms, meters, circuit breakers and mimic lights.
5. Transfer load: Record output voltage, output current, bypass voltage and bypass current during transfer from inverter to bypass and bypass to inverter with no load and 100% kW load.
6. Input failure test: With the module operating at working load and the battery connected, disconnect the input power to the UPS. Record output voltage, output current, input voltage and input current during on battery operation. Verify and record the actual battery protection time.
7. Record all parameters indicated on the LCD panel under load.

3.7 FIELD SERVICE SUPPORT

The Manufacturers Authorized Service or Repair Center of the UPS and associated items shall have permanent service within 2 hours drive time of the University of New Orleans. These facilities shall comprise a permanent force of factory trained service personnel on 24-hour call, experienced in servicing this type of equipment, providing warranty and routine maintenance service to afford the owner maximum protection. These facilities shall have in stock the manufacturer's recommended list of parts necessary for the performance of routine maintenance and repairs

INSURANCE REQUIREMENTS FOR CONTRACTORS

The Contractor shall purchase and maintain for the duration of the contract insurance against claims for injuries to persons or damages to property which may arise from or in connection with the performance of the work hereunder by the Contractor, its agents, representatives, employees or subcontractors.

A. MINIMUM SCOPE AND LIMITS OF INSURANCE

1. Workers Compensation

Workers Compensation insurance shall be in compliance with the Workers Compensation law of the State of the Contractor's headquarters. Employers Liability is included with a minimum limit of \$1,000,000 per accident/per disease/per employee. If work is to be performed over water and involves maritime exposure, applicable LHWCA, Jones Act, or other maritime law coverage shall be included. A.M. Best's insurance company rating requirement may be waived for workers compensation coverage only.

2. Commercial General Liability

Commercial General Liability insurance, including Personal and Advertising Injury Liability and Products and Completed Operations, shall have a minimum limit per occurrence of \$1,000,000 and a minimum general annual aggregate of \$2,000,000. The Insurance Services Office (ISO) Commercial General Liability occurrence coverage form CG 00 01 (current form approved for use in Louisiana), or equivalent, is to be used in the policy. Claims-made form is unacceptable.

3. Automobile Liability

Automobile Liability Insurance shall have a minimum combined single limit per accident of \$1,000,000. ISO form number CA 00 01 (current form approved for use in Louisiana), or equivalent, is to be used in the policy. This insurance shall include third-party bodily injury and property damage liability for owned, hired and non-owned automobiles.

B. DEDUCTIBLES AND SELF-INSURED RETENTIONS

Any deductibles or self-insured retentions must be declared to and accepted by the Agency. The Contractor shall be responsible for all deductibles and self-insured retentions.

C. OTHER INSURANCE PROVISIONS

The policies are to contain, or be endorsed to contain, the following provisions:

1. Commercial General Liability and Automobile Liability Coverages

- a. The Agency, its officers, agents, employees and volunteers shall be named as an additional insured as regards negligence by the contractor. ISO Forms CG 20 10 (for ongoing work) AND CG 20 37 (for completed work) (current forms approved for use in Louisiana), or equivalents, are to be used when applicable. The coverage shall contain no special limitations on the scope of protection afforded to the Agency.
- b. The Contractor's insurance shall be primary as respects the Agency, its officers, agents, employees and volunteers for any and all losses that occur under the contract. Any insurance or self-insurance maintained by the Agency shall be excess and non-contributory of the Contractor's insurance.

2. Workers Compensation and Employers Liability Coverage

To the fullest extent allowed by law, the insurer shall agree to waive all rights of subrogation against the Agency, its officers, agents, employees and volunteers for losses arising from work performed by the Contractor for the Agency.

3. All Coverages

- a. All policies must be endorsed to require 30 days written notice of cancellation to the Agency. Ten-day written notice of cancellation is acceptable for non-payment of premium. Notifications shall comply with the standard cancellation provisions in the Contractor's policy. In addition, Contractor is required to notify Agency of policy cancellations or reductions in limits.
- b. The acceptance of the completed work, payment, failure of the Agency to require proof of compliance, or Agency's acceptance of a non-compliant certificate of insurance shall not release the Contractor from the obligations of the

insurance requirements or indemnification agreement.

- c. The insurance companies issuing the policies shall have no recourse against the Agency for payment of premiums or for assessments under any form of the policies.
- d. Any failure of the Contractor to comply with reporting provisions of the policy shall not affect coverage provided to the Agency, its officers, agents, employees and volunteers.

D. ACCEPTABILITY OF INSURERS

- 1. All required insurance shall be provided by a company or companies lawfully authorized to do business in the jurisdiction in which the Project is located. Insurance shall be placed with insurers with an A.M. Best's rating of **A-:VI or higher**. This rating requirement may be waived for workers compensation coverage only.
- 2. If at any time an insurer issuing any such policy does not meet the minimum A.M. Best rating, the Contractor shall obtain a policy with an insurer that meets the A.M. Best rating and shall submit another Certificate of Insurance within 30 days.

E. VERIFICATION OF COVERAGE

- 1. Contractor shall furnish the Agency with Certificates of Insurance reflecting proof of required coverage. The Certificates for each insurance policy are to be signed by a person authorized by that insurer to bind coverage on its behalf. The Certificates are to be received and approved by the Agency before work commences and upon any contract renewal or insurance policy renewal thereafter.
- 2. The Certificate Holder Shall be listed as follows:

State of Louisiana
University of New Orleans, Its Officers, Agents, Employees and Volunteers
2000 Lakeshore Drive, New Orleans, LA 70148
Contract #:
- 3. In addition to the Certificates, Contractor shall submit the declarations page and the cancellation provision for each insurance policy. The Agency reserves the right to request complete certified copies of all required insurance policies at any time.
- 4. Upon failure of the Contractor to furnish, deliver and maintain required insurance, this contract, at the election of the Agency, may be suspended, discontinued or terminated. Failure of the Contractor to purchase and/or maintain any required insurance shall not relieve the Contractor from any liability or indemnification under the contract.

F. SUBCONTRACTORS

Contractor shall include all subcontractors as insureds under its policies OR shall be responsible for verifying and maintaining the Certificates provided by each subcontractor. Subcontractors shall be subject to all of the requirements stated herein. The Agency reserves the right to request copies of subcontractor's Certificates at any time.

G. WORKERS COMPENSATION INDEMNITY

In the event Contractor is not required to provide or elects not to provide workers compensation coverage, the parties hereby agree that Contractor, its owners, agents and employees will have no cause of action against, and will not assert a claim against, the State of Louisiana, its departments, agencies, agents and employees as an employer, whether pursuant to the Louisiana Workers Compensation Act or otherwise, under any circumstance. The parties also hereby agree that the State of Louisiana, its departments, agencies, agents and employees shall in no circumstance be, or considered as, the employer or statutory employer of Contractor, its owners, agents and employees. The parties further agree that Contractor is a wholly independent contractor and is exclusively responsible for its employees, owners, and agents. Contractor hereby agrees to protect, defend, indemnify and hold the State of Louisiana, its departments, agencies, agents and employees harmless from any such assertion or claim that may arise from the performance of this contract.

H. INDEMNIFICATION/HOLD HARMLESS AGREEMENT

1. Contractor agrees to protect, defend, indemnify, save, and hold harmless, the University of New Orleans, its officers, agents, servants, employees, and volunteers, from and against any and all claims, damages, expenses, and liability arising out of injury or death to any person or the damage, loss or destruction of any property which may occur, or in any way grow out of, any act or omission of Contractor, its agents, servants, and employees, or any and all costs, expenses and/or attorney fees incurred by Contractor as a result of any claims, demands, suits or causes of action, except those claims, demands, suits, or causes of action arising out of the negligence of the University of New Orleans, its officers, agents, servants, employees and volunteers.
2. Contractor agrees to investigate, handle, respond to, provide defense for and defend any such claims, demands, suits, or causes of action at its sole expense and agrees to bear all other costs and expenses related thereto, even if the claims, demands, suits, or causes of action are groundless, false or fraudulent. The University of New Orleans may, but is not required to, consult with the Contractor in the defense of claims, but this shall not affect the Contractor's responsibility for the handling of and expenses for all claims.

INDEMNIFICATION AGREEMENT

The _____{Contractor/Lessee} agrees to protect, defend, indemnify, save, and hold harmless, the University of New Orleans, its officers, agents, servants, employees, and volunteers, from and against any and all claims, damages, expenses, and liability arising out of injury or death to any person or the damage, loss or destruction of any property which may occur, or in any way grow out of, any act or omission of _____{Contractor/Lessee}, its agents, servants, and employees, or any and all costs, expenses and/or attorney fees incurred by _____{Contractor/Lessee} as a result of any claims, demands, suits or causes of action, except those claims, demands, suits, or causes of action arising out of the negligence of the University of New Orleans, its officers, agents, servants, employees and volunteers.

_____ {Contractor/Lessee} agrees to investigate, handle, respond to, provide defense for and defend any such claims, demands, suits, or causes of action at its sole expense and agrees to bear all other costs and expenses related thereto, even if the claims, demands, suits, or causes of action are groundless, false or fraudulent. The University of New Orleans may, but is not required to, consult with the Contractor in the defense of claims, but this shall not affect the Contractor's responsibility for the handling of and expenses for all claims.

Accepted by _____
Company Name

Signature

Title

Date Accepted _____

Is Certificate of Insurance Attached? _____ Yes _____ No

Contract No. _____ for the University of New Orleans

PURPOSE OF CONTRACT: _____
